District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.62192 Longitude -103.85136
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hackberry DI 2	Site Type Tank Battery
Date Release Discovered 10-18-2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
A	34	19S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 8.71	Volume Recovered (bbls) 8.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: LO found a leak of produced water on a 4" Victaulic clamp gasket on the tester water dump line. A vacuum truck was dispatched and recovered all standing fluid. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle L ittrell
Title: SH&E Supervisor

Signature: [signature]
Date: 10-30-20

email: Kyle_L ittrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus
Date: 11/6/2020

NRM2031147310

Location:	Hackberry DI 2	
Spill Date:	10/18/2020	
Area 1		
Approximate Area =	624.70	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	8.56	bbls
Area 2		
Approximate Area =	85.30	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Produced Water =	0.15	bbls

TOTAL VOLUME OF LEAK		
Total Produced Water =	**8.71**	**bbls**
TOTAL VOLUME RECOVERED		
Total Produced Water =	**8.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4-9-2021

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4-9-2021

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Date:

Printed Name: Title:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2031147310
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4-9-2021

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Robert Hamlet Date: 7/16/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet Date: 7/16/2021

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

WSP USA
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

April 8, 2021

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Closure Request
Hackberry DI 2
Incident Number NRM2031147310
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Hackberry DI 2 (Site) in Unit A, Section 34, Township 19 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water within an earthen bermed containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request describing site assessment and delineation activities that have occurred and requesting no further action (NFA) for Incident Number NRM2031147310.

RELEASE BACKGROUND

On October 18, 2020, the lease operator discovered a release of approximately 8.71 barrels (bbls) of produced water resulting from a 4-inch Victaulic clamp gasket failure. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 8 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on October 30, 2020. The release was assigned Incident Number NRM2031147310.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On February 26, 2021, WSP installed a soil boring within 0.5 miles of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring CP-01864 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was

encountered during drilling activities. The location of the borehole is approximately 0.43 miles southwest of the Site and is depicted on Figure 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The signed New Mexico Office of the State Engineer permit and boring log are included in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is an unnamed watercourse, located approximately 4.27 miles west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

On March 04, 2021 WSP personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel reviewed and verified the Form C-141 incident description (release source and release location). Delineation activities were warranted based on the visual observations and field screening results.

On March 23, 2021, WSP personnel returned to the Site to conduct delineation activities. One borehole (BH01) was advanced via hand auger in an area nearest to the point of release to assess for the presence or absence of impacted soil. Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Two delineation soil samples were collected from the borehole at depths of 1-foot and 6 feet bgs. Field screening results and

observations for the borehole was logged on a lithologic/soil sampling log, which is included in Attachment 2. The borehole location is depicted on Figure 2. Photographic documentation of the site during delineation activities is included in Attachment 3.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Xenco Laboratories (Eurofins Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from borehole BH01 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

WSP personnel advanced one borehole (BH01) within the release extent inside a containment to assess the presence or absence of soil impacts resulting from the October 18, 2020 produced water release. Two delineation soil samples were collected from the borehole at depths of 1-foot and 6 feet bgs. Laboratory analytical results for the delineation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additionally, the release was vertically delineated to below the most stringent Closure Criteria.

Based on initial response efforts, soil sample laboratory analytical results compliant with the Closure Criteria and confirmed depth to groundwater greater than 100 feet bgs, no impacted soil was identified, and no excavation was required as a result of the produced water release. XTO respectfully requests NFA for Incident Number NRM2031147310.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

WSP USA Inc.

Fatima Smith
Associate Consultant, Geologist

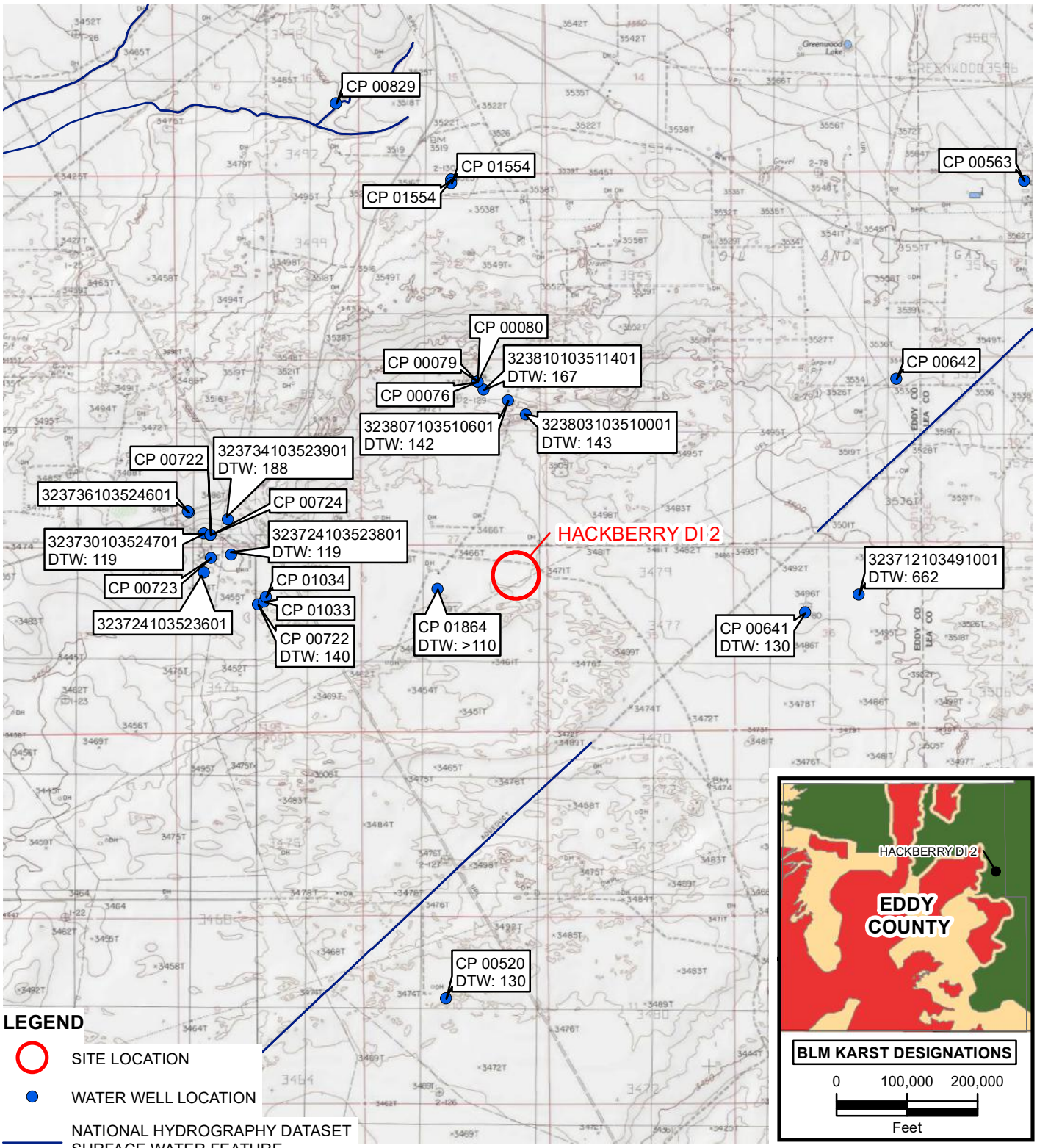
Ashley L. Ager, P.G.
Managing Director, Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Lithologic/Soil Sampling Log
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER NRM2031147310

FIGURE 1
SITE LOCATION MAP
HACKBERRY DI 2
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\MXD\012920156_HACKBERRY DI 2\012920156_FIG01_SL_RECEPTOR_2021.mxd

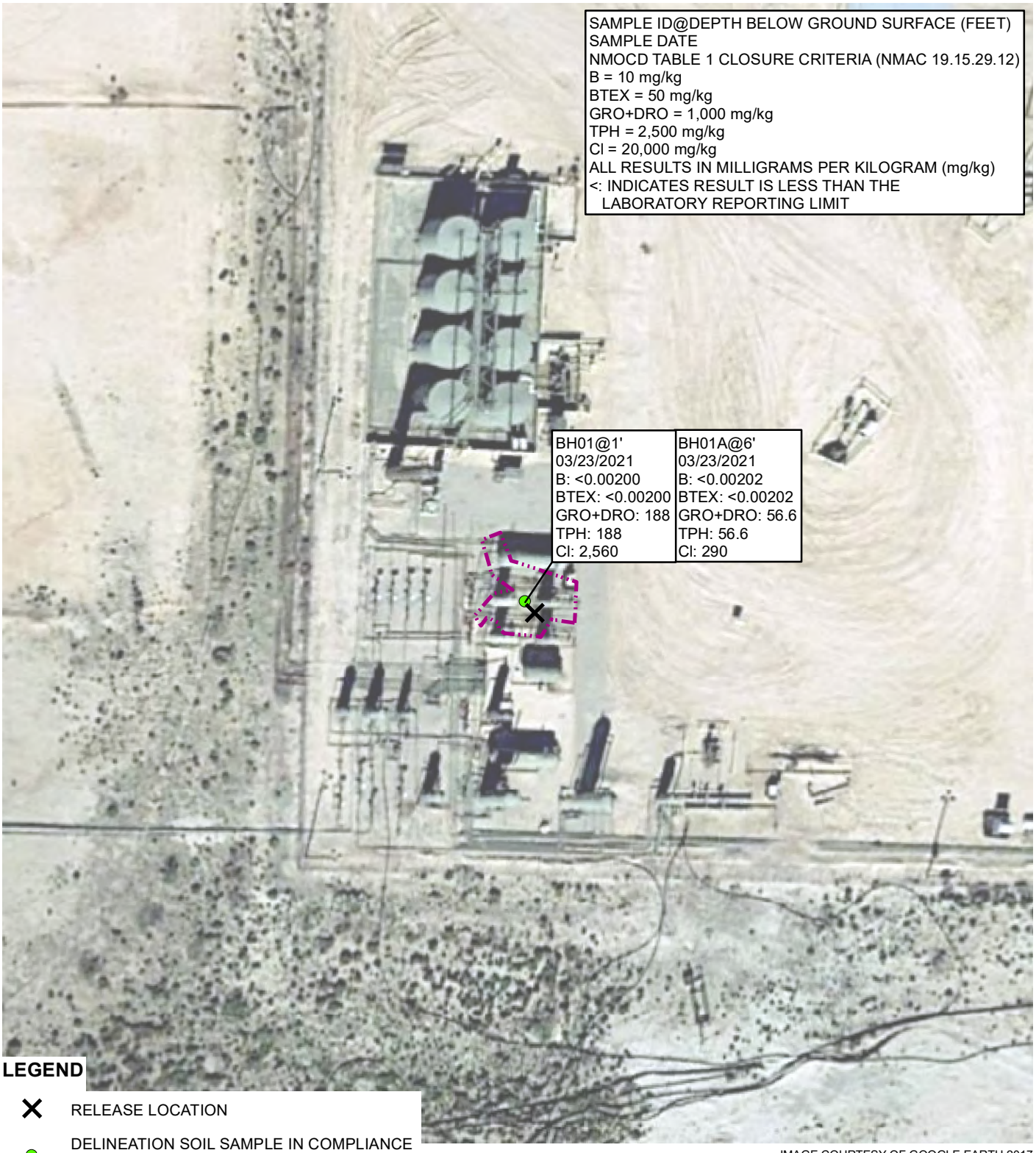


FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
HACKBERRY DI 2
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920156_HACKBERRY DI 2\012920156_FIG02_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Hackberry DI 2
Incident Number NRM2031147310
XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Delineation Samples										
BH01	03/23/2021	1	<0.00200	<0.00200	188	<49.9	<49.9	188	188	2,560
BH01	03/23/2021	6	<0.00202	<0.00202	56.6	<49.9	<49.9	56.6	56.6	290

Notes:

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established
BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard
Greyed data represents samples that were excavated

ATTACHMENT 1: REFERENCED WELL RECORD

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 686596
File Nbr: CP 01864

Jan. 29, 2021

KYLE ITTRELL
XTO ENERGY INC
6401 ENERGY INC
MIDLAND, TX 79707

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

JUAN HERNANDEZ
(575)622-6521

Enclosure

explore

File No. CP-1864 POD1

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☒ Other(Describe): Environmental Sampling
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: Requested End Date: TBD

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Kyle Littrell	Name: Kalei Jennings
Contact or Agent: XTO Energy, Inc. check here if Agent ☒	Contact or Agent: WSP USA check here if Agent ☐
Mailing Address: 6401 Holiday Hill Road	Mailing Address: 508 West Stevens Street
City: Midland	City: Carlsbad
State: Texas Zip Code: 79707	State: New Mexico Zip Code: 88220
Phone: 432-682-8873 ☐ Home ☐ Cell Phone (Work):	Phone: 281-702-2329 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): kyle_littrell@xtoenergy.com	E-mail (optional): Kalei.Jennings@wsp.com

OSE DIT JAN 19 2021 PM4:44

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 11/17/16

File No.: CP-1864	Trn. No.: 686596	Receipt No.: 2-42929
Trans Description (optional): POD1		
Sub-Basin: CP	PCW/LOG Due Date: 1-28-22	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
BH01 CP-1864 POD1	-103.858747	32.620717	NE/4 NW/4 SEC34 T19S R31E

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ **Yes** ■ **No** **If yes, how many** _____

Other description relating well to common landmarks, streets, or other:
INT OF POTASH MINES RD AND SHUGART RD, HEAD EAST FOR APPROX. 6.6 MI THEN TURN RIGHT ONTO UNNAMED ACCESS RD. CONTINUE FOR APPROX 1.6 MI, THEN TURN RIGHT AND FOLLOW RD 2.0 MI TO LOCATION (ON LEFT).

Well is on land owned by: Federal - Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ **Yes** ■ **No**
If yes, how many_____

Approximate depth of well (feet): 110	Outside diameter of well casing (inches): NA
Driller Name: Atkins Engineering	Driller License Number: 1249

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

XTO Energy, Inc. respectfully requests access represented within the attached file to install one (1) soil boring to assist with depth to water determination for Incident files NRM2031147310 located at (32.620717, -103.858747) and NRM2010853797 located at (32.622056, -103.851442) and additional incidents with 1/2 mile from the bore.

OSE DII JAN 19 2021 PM4:44

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: CP-1864	Trn No.: 1686596

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application.

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Kalei Jennings

Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Kalei Jennings

Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 29th day of January 20 21, for the State Engineer,

John R. D'Antonio, Jr., P.E., State Engineer

By: Signature Print

Title: Juan Hernandez, Water Resource Manager
Print

SEAL OF THE STATE OF NEW MEXICO CREATA 1912

OSE DIT JAN 19 2021 PM4:45

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: CP-1864 Trn No.: 1816596

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

Trn Desc: CP 01864 POD1

File Number: CP 01864
Trn Number: 686596

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

LOG The Point of Diversion CP 01864 POD1 must be completed and the Well Log filed on or before 01/28/2022.

IT IS THE PERMITTEES RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

SHOULD THE PERMITTEE CHANGE THE PURPOSE OF USE TO OTHER THAN MONITORING PURPOSES, AN APPLICATION SHALL BE ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 01/19/2021 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

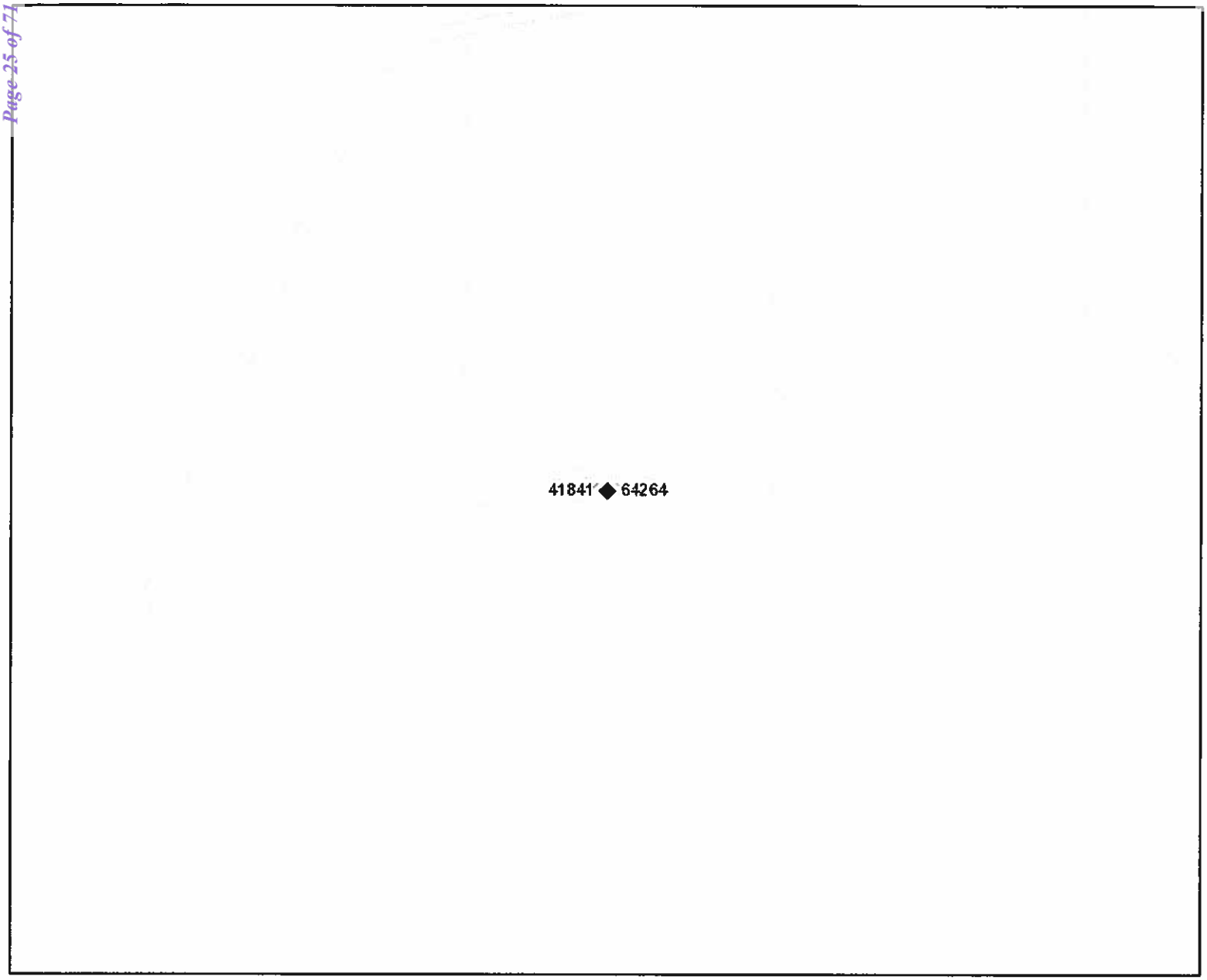
This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 29th day of April, A.D., 2021

John R. D'Antonio, Jr. P.E., State Engineer

By: JUAN HERNANDEZ

Trn Desc: CP 01864 POD1 File Number: CP 01864
Trn Number: 686596



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting 607068.657

Northing 3609823.434

State Plane - NAD 83 (f) - Zone E

Easting 687457.234

Northing 589899.095

Degrees Minutes Seconds

Latitude 32 : 37 : 14.850000

Longitude -103 : 51 : 31.490000

Location pulled from Coordinate Search

NEW MEXICO OFFICE OF THE STATE ENGINEER

N

1:2,257

ft

0 45 90 180

Image Info
Source: NA
Date: NA
Resolution (m):NA
Accuracy (m): NA

Spatial Information

OSE Administrative Area: Eddy
County: Eddy
Groundwater Basin: Capitan
Abstract Area:CP

Sub-Basin: Upper Pecos-Black

Land Grant: Not in Land Grant
Restrictions:
NA

PLSS Description

SWSENENW Qtr of Sec 34 of 019S 031E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

POD Information

Owner: XTO/LT ENVIRO/BLM
File Number: CP- 1864 POD1
POD Status: NoData
Permit Status: NoData
Permit Use: NoData
Purpose: MONITOR BH01

YM 1/28/2

Calculated PLSS
Coord Search Location
WRAB Abstract Project Areas
Federal Lands
New Mexico State Trust Lands
Subsurface Estate
Surface Estate
Both Estates
Bernalillo County Parcels 2020
Catron County Parcels 2020
Chaves County Parcels 2020
Cibola County Parcels 2020
Colfax County Parcels 2020
Curry County Parcels 2020
De Baca County Parcels 2020
Dona Ana County Parcels 2020
Eddy County Parcels 2020
Grant County Parcels 2020
Guadalupe County Parcels 2020
Harding County Parcels 2020
Hidalgo County Parcels 2020
Lea County Parcels 2020
Lincoln County Parcels 2020
Los Alamos County Parcels 2020
Luna County Parcels 2020
McKinley County Parcels 2020
Mora County Parcels 2020
Otero County Parcels 2020

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220-6292

In Reply Refer To:
3162.4 (NM-080)
NMLC069705

January 6, 2021

NM Office of the State Engineer
1900 W. Second St.
Roswell, NM 88201

Re: Big Eddy Unit 265H
30-015-41076
Section 34, T19S-R31E
Eddy County, New Mexico

Gentlemen:

The above well location and the immediate area was impacted from a recent spill event. In order to fully delineate the impacted site, advanced soil boring will need to take place at approximately 50 feet below ground surface via a truck-mounted rig with hallow stem auger equipment. The boring will be secured and left open for 72 hours at which time XTO will assess for the presence or absence of groundwater. The Bureau of Land Management (landowner) authorizes the access of the pad to accomplish the full delineation of this site.

If you have any questions contact Crisha Morgan, at 575-234-5987.

Sincerely,

Crisha A. Morgan
Certified Environmental Protection Specialist

OSE DII JAN 19 2021 PM4:45

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE -- Other instructions on page 2.

5. Lease Serial No.
NMLC069705

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Big Eddy Unit #265H

2. Name of Operator
XTO Energy, Inc.

9. API Well No.
30-015-41076

3a. Address
6401 Holiday Hill Road, Bldg 5
Midland, TX 79707

3b. Phone No. *(include area code)*
432-620-6724

10. Field and Pool or Exploratory Area
Wolfcamp

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
Unit C, Sec 34, T 19S, R 31E

11. Country or Parish, State
Eddy County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Surface Disturbance
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

XTO Energy, Inc. respectfully requests access represented within the attached file to install (1) soil boring , located at (32.620717, -103.858747) to assist with depth to water determination for incident file NRM2031147310 and additional incidents with 1/2 mile from the bore.

RECEIVED
OCD DTI JAN 19 2021 PM4:45

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)*
Adrian Baker

Title SHE Coordinator

Signature

Date 12-17-20

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
Trisha Morgan

Title Certified EPS

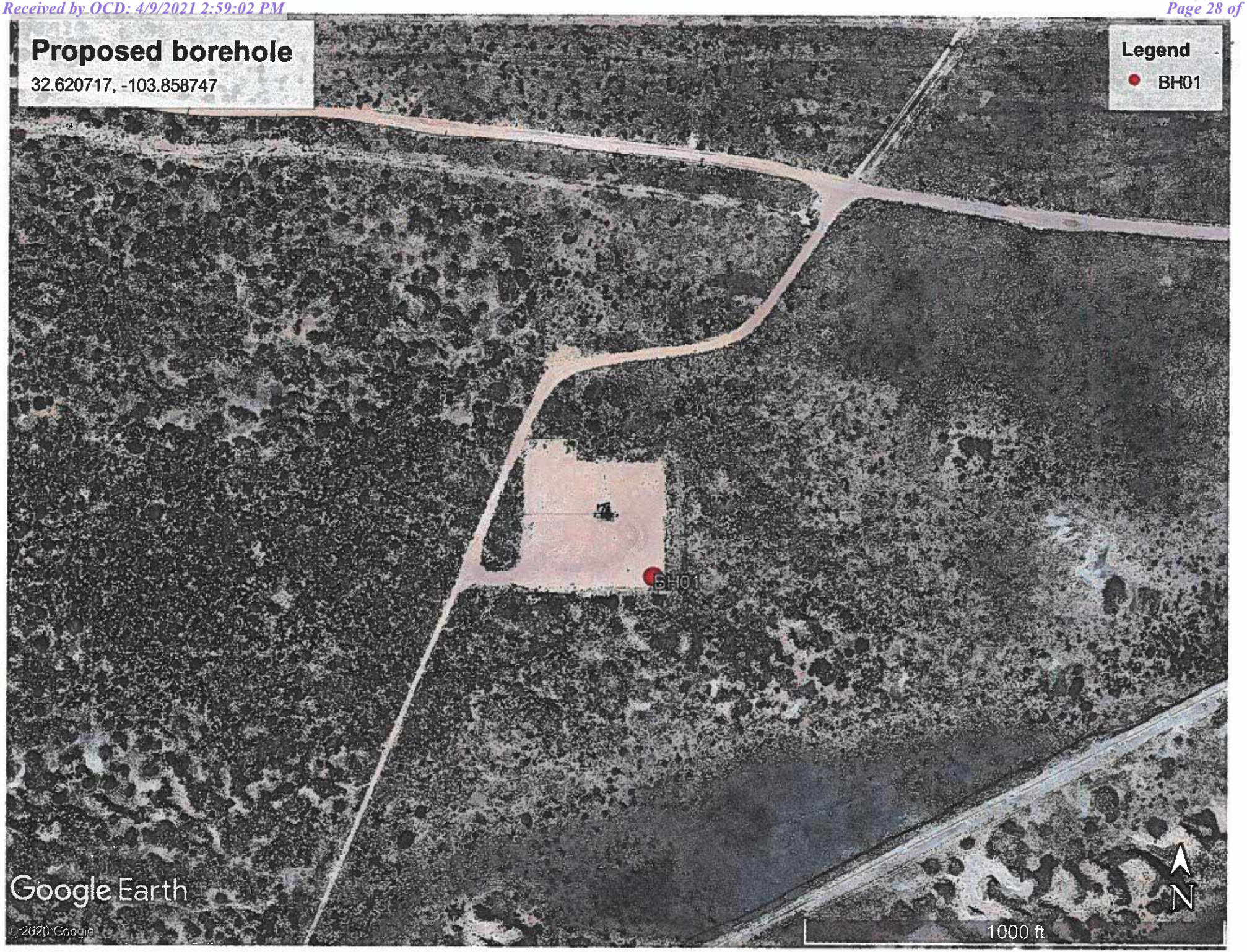
Date 01/20/2021

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)


Proposed borehole
32.620717, -103.858747
Legend
BH01
BH01
Google Earth
©2020 Google
1000 ft
N

From: Littrell, Kyle
To: Ager, Ashley; Cole, Aimee; Hernandez, Joseph; Jennings, Kalei; Morrissey, Tacoma
Cc: Baker, Adrian
Subject: NMOSE Drilling Permits
Date: Wednesday, November 18, 2020 12:45:35 PM

NMOSE,

The following WSP personnel have permission to submit and sign NMOSE well permitting documents on behalf of XTO Energy, Inc.

Ashley Ager
Aimee Cole
Tacoma Morrissey
Joseph Hernandez
Kalei Jennings

Thank you. --Kyle

Kyle Littrell
Environmental Supervisor
Permian and Delaware Business Units

XTO Energy Inc.
6401 N. Holiday Hill Dr.
Midland, Tx 79707
Phone:(432)-221-7331
Mobile:(970)-317-1867
kyle_littrell@xtoenergy.com

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH01	Date: 2/26/2021
	Site Name: Hackberry DI 2 Battery	
	RP or Incident Number:	
	LTE Job Number: TE012920156	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By SL	Method: Hollow Stem Auguer
Lat/Long: 32.620661,-103.858837	Field Screening: N/A	Hole Diameter: 6.5" / Total Depth: 110.2'
Comments: No field screening, only logged lithology, well screened from 90.2' - 110.2'		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D			N			0	CCHE	0-1.5' Caliche w/ sand, no odor, no stain, tan, off white, dry
D			N			5 10	SP-SM	1.5'-13' Sand, no odor, no stain, m-f, well sorted, gray, tabm trace silt, some caliche, dry -4 no caliche
M			N			15 20 25	SS	13'-24' Sandstone, m-f, low consolidation, gray, little coarse gravel, dry -17'-19' sandy clay string, brown, no odor, no stain, no plasticity no cohesion, m-f, moderately sorted, moist
M			N			30 35	SP-SM	24'-34' Sand w/ caliche, gray, tan, no odor, no stain, moist, m-f, well sorted -26' clay stringer, no stain, no plasiticity, no cohesion
M			N			40	CCHE	34'-41' Caliche w/ sand, no odor, no stain, m-f, well sorted, tan, offwhite, moderate consolidation, moist
M			N			45 50	SC	41'-50' Clayey sand, gray, fine grain, well sorted, medium plasticty, cohesive, moist, w/ caliche
D			N			55 60 65 70	CCHE	50'-69' Caliche w/ sandy clay, no odor, no stain, m-f, no cohesion, no plasticity, dry
D			N			75 80	SS	69'-79' Sandstone, tan, m-f, no odor, no stain, high consolidation, dry
M			N			85 90	SC	79'-92' Clayey sand, no odor, no stain, medium plasticity, cohesive, fine grained sand, brown, moist -84' high plasticity clay, cohesive, moist
M			N			95 100 105 110	CLST	92'-110.2' Claystone, brown, high plasticity, cohesive, no odor, no stain, moist
						115 120		TD @ 110.2'

ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOG

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH01	Date: 03/23/2021
	Site Name: Hackberry DI 2	
	RP or Incident Number: NRM203147310	
	WSP Job Number: TE012920156	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand auger
Lat/Long: 32.621834, -103.851532 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 6 feet bgs

Comments: All chloride field screenings include a 40% correction factor
M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			Y			0	GP	GRAVEL-SAND mixture, dry, light brown, poorly graded, medium-fine grain, trace dark brown staining, no odor
D	3,522	11.8	N	BH01	1	1	SP	SAND, dry, dark brown, poorly graded, fine-very fine grain, no stain no odor
D	2,312	8.7	N		2			
						3	CL	SANDY-CLAY, dry, light brown-tan, poorly graded, fine-very fine grain, trace clay, low plasticity, non cohesive, no stain, no odor
D	1,551	13.0	N		4			
M	229	1.7	N	BH01	6	6	SP	SAND, moist, light brown, poorly graded, fine-very fine grain, no stain, no odor

TD @ 6 ft bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

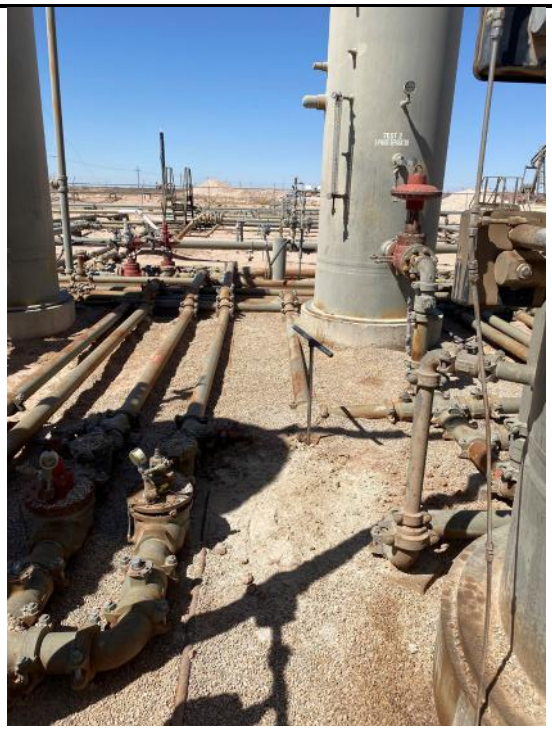
PHOTOGRAPHIC LOG		
XTO Energy, Inc	Hackberry DI 2 Eddy County, New Mexico	TE012920156

Photo No.	Date
1	March 23, 2021

Hand augering borehole (BH01) facing West.

Photo No.	Date
2	March 23, 2021

Hand augering borehole (BH01) facing West.



ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-411-1
Laboratory Sample Delivery Group: Eddy Co NM
Client Project/Site: Hackberry DI 2

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

JKramer

Authorized for release by:
3/26/2021 4:15:39 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Laboratory Job ID: 890-411-1
SDG: Eddy Co NM

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-411-1
Project/Site: Hackberry DI 2 SDG: Eddy Co NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Job ID: 890-411-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-411-1

Comments
No additional comments.

Receipt
The sample was received on 3/23/2021 1:55 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01 (890-411-1).

General Chemistry
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-863 and analytical batch 880-864 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Client Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Client Sample ID: BH01

Date Collected: 03/23/21 09:43
Date Received: 03/23/21 13:55

Lab Sample ID: 890-411-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/24/21 16:24	03/25/21 02:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/24/21 16:24	03/25/21 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/24/21 16:24*	*03/25/21 02:24*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/24/21 16:24*	*03/25/21 02:24*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 *+	49.9		mg/Kg		03/25/21 09:19	03/25/21 13:07	1
Diesel Range Organics (Over C10-C28)	**188**		49.9		mg/Kg		03/25/21 09:19	03/25/21 13:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/25/21 09:19	03/25/21 13:07	1
Total TPH	**188**		49.9		mg/Kg		03/25/21 09:19	03/25/21 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*03/25/21 09:19*	*03/25/21 13:07*	*1*
o-Terphenyl	*103*		*70 - 130*	*03/25/21 09:19*	*03/25/21 13:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2560**		25.2		mg/Kg			03/26/21 11:04	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-411-1	BH01	108	99										
LCS 880-821/1-A	Lab Control Sample	103	99										
LCSD 880-821/2-A	Lab Control Sample Dup	104	96										
MB 880-826/63	Method Blank	103	95										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-411-1	BH01	101	103										
890-411-1 MS	BH01	120	110										
890-411-1 MSD	BH01	115	104										
LCS 880-834/2-A	Lab Control Sample	108	102										
LCSD 880-834/3-A	Lab Control Sample Dup	103	95										
MB 880-834/1-A	Method Blank	102	107										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: LCS 880-821/1-A
Matrix: Solid
Analysis Batch: 826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 821

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1082		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.1116		mg/Kg		112	70 - 130		
Toluene			0.100	0.1091		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.2263		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1118		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-821/2-A
Matrix: Solid
Analysis Batch: 826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 821

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1043		mg/Kg		104	70 - 130	4	35
Ethylbenzene			0.100	0.1115		mg/Kg		112	70 - 130	0	35
Toluene			0.100	0.1081		mg/Kg		108	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2277		mg/Kg		114	70 - 130	1	35
o-Xylene			0.100	0.1128		mg/Kg		113	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: MB 880-826/63
Matrix: Solid
Analysis Batch: 826

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			03/25/21 01:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			03/25/21 01:35	1
Toluene	<0.00200	U	0.00200		mg/Kg			03/25/21 01:35	1
Total BTEX	<0.00200	U	0.00200		mg/Kg			03/25/21 01:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			03/25/21 01:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			03/25/21 01:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			03/25/21 01:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/25/21 01:35*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*		*03/25/21 01:35*	*1*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-834/1-A
Matrix: Solid
Analysis Batch: 847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
Total TPH	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*03/25/21 09:19*	*03/25/21 12:03*	*1*
o-Terphenyl	*107*		*70 - 130*	*03/25/21 09:19*	*03/25/21 12:03*	*1*

Lab Sample ID: LCS 880-834/2-A
Matrix: Solid
Analysis Batch: 847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1376	*+	mg/Kg		138	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1123		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: LCSD 880-834/3-A
Matrix: Solid
Analysis Batch: 847

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 834

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1230		mg/Kg		123	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1109		mg/Kg		111	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-411-1 MS
Matrix: Solid
Analysis Batch: 847

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 *+	999	1305	F1	mg/Kg		131	70 - 130		
Diesel Range Organics (Over C10-C28)	188		999	1242		mg/Kg		106	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-411-1 MS
Matrix: Solid
Analysis Batch: 847

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 834

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: 890-411-1 MSD
Matrix: Solid
Analysis Batch: 847

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 *+	997	1308	F1	mg/Kg		131	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	188		997	1168		mg/Kg		98	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	104		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-863/1-A
Matrix: Solid
Analysis Batch: 864

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/25/21 16:09	1

Lab Sample ID: LCS 880-863/2-A
Matrix: Solid
Analysis Batch: 864

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	269.1		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-863/3-A
Matrix: Solid
Analysis Batch: 864

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.8		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-411-1
Project/Site: Hackberry DI 2 SDG: Eddy Co NM

GC VOA

Prep Batch: 821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Total/NA	Solid	5035	
LCS 880-821/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-821/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Total/NA	Solid	8021B	821
MB 880-826/63	Method Blank	Total/NA	Solid	8021B	
LCS 880-821/1-A	Lab Control Sample	Total/NA	Solid	8021B	821
LCSD 880-821/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	821

GC Semi VOA

Prep Batch: 834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-834/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-834/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-411-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-411-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Total/NA	Solid	8015B NM	834
MB 880-834/1-A	Method Blank	Total/NA	Solid	8015B NM	834
LCS 880-834/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	834
LCSD 880-834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	834
890-411-1 MS	BH01	Total/NA	Solid	8015B NM	834
890-411-1 MSD	BH01	Total/NA	Solid	8015B NM	834

HPLC/IC

Leach Batch: 863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Soluble	Solid	DI Leach	
MB 880-863/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-863/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-863/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-411-1	BH01	Soluble	Solid	300.0	863
MB 880-863/1-A	Method Blank	Soluble	Solid	300.0	863
LCS 880-863/2-A	Lab Control Sample	Soluble	Solid	300.0	863
LCSD 880-863/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	863

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Client Sample ID: BH01

Date Collected: 03/23/21 09:43
Date Received: 03/23/21 13:55

Lab Sample ID: 890-411-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			821	03/24/21 16:24	MR	XM
Total/NA	Analysis	8021B		1	826	03/25/21 02:24	MR	XM
Total/NA	Prep	8015NM Prep			834	03/25/21 09:19	DM	XM
Total/NA	Analysis	8015B NM		1	847	03/25/21 13:07	AM	XM
Soluble	Leach	DI Leach			863	03/25/21 11:20	CH	XM
Soluble	Analysis	300.0		5	864	03/26/21 11:04	WP	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI 2

Job ID: 890-411-1
SDG: Eddy Co NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-411-1	BH01	Solid	03/23/21 09:43	03/23/21 13:55	

Cost center # 1080831001
Incident # NRM2031147310

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281) 702-2329	Email:	joseph.hernandez@wsp.com, fatima.smith@wsp.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Hackberry DI 2	Turn Around	☐ Routine ☒ Rush
Project Number:	TE012920156	Due Date:	24 hrs
Project Location:	Eddy county	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Fatima Smith		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#M-00
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	1.2
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	1.0
Total Containers:		Corrected Temperature:	

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8021)	BTEX (EPA 8015)	Chloride (EPA 300.0)	Sample Comments
BH01	S	3/23/21	0943	1'		1		X	X	X	

890-411 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Alice Caufman	3.23.21 1355			
3				4		
5				6		

Revised Date 08/25/2020 Rev 2020.2

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-125 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-411-1
Address: 1211 W Florida Ave,	Due Date Requested: 3/29/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Hackberry DI2	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BH01 (890-411-1)	3/23/21	09 43 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Clive Clifton 3.23.21	Date/Time:	Company	Received by:	Date/Time: 3/24/21 11:Wam	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-411-1
SDG Number: Eddy Co NM

Login Number: 411
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-411-1
SDG Number: Eddy Co NM

Login Number: 411
List Number: 2
Creator: Mireles, David

List Source: Eurofins Midland
List Creation: 03/24/21 11:30 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-412-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: Hackberry DI2

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

JKramer

Authorized for release by:
3/26/2021 4:19:35 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Laboratory Job ID: 890-412-1
SDG: Eddy County NM

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-412-1
Project/Site: Hackberry DI2 SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Job ID: 890-412-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-412-1

Receipt
The sample was received on 3/23/2021 1:55 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01 (890-412-1).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-826 recovered above the upper control limit for several analyte. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-826/2).

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH01 (890-412-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

GC Semi VOA
Method 8015B NM: The laboratory control sample (LCS) and the matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-834 and analytical batch 880-847 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10. These analytes were biased high in the LCS, MS/MSD and were not detected in the associated samples; therefore, the data have been reported.

General Chemistry
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-863 and analytical batch 880-864 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Client Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Client Sample ID: BH01

Date Collected: 03/23/21 10:24
Date Received: 03/23/21 13:55

Lab Sample ID: 890-412-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
Total BTEX	<0.00202	U	0.00202		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/24/21 16:24	03/25/21 21:45	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/24/21 16:24	03/25/21 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*03/24/21 16:24*	*03/25/21 21:45*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/24/21 16:24*	*03/25/21 21:45*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9		mg/Kg		03/25/21 09:19	03/25/21 14:10	1
Diesel Range Organics (Over C10-C28)	**56.6**		49.9		mg/Kg		03/25/21 09:19	03/25/21 14:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/25/21 09:19	03/25/21 14:10	1
Total TPH	**56.6**		49.9		mg/Kg		03/25/21 09:19	03/25/21 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*03/25/21 09:19*	*03/25/21 14:10*	*1*
o-Terphenyl	*105*		*70 - 130*	*03/25/21 09:19*	*03/25/21 14:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		5.02		mg/Kg			03/26/21 11:21	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-412-1
Project/Site: Hackberry DI2 SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-412-1	BH01	93	86
MB 880-842/5-A	Method Blank	67 S1-	82

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-412-1	BH01	105	105
LCS 880-834/2-A	Lab Control Sample	108	102
LCSD 880-834/3-A	Lab Control Sample Dup	103	95
MB 880-834/1-A	Method Blank	102	107

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-842/5-A
Matrix: Solid
Analysis Batch: 846

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 842

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/25/21 09:00	03/25/21 12:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/25/21 09:00	03/25/21 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*03/25/21 09:00*	*03/25/21 12:03*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*03/25/21 09:00*	*03/25/21 12:03*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-834/1-A
Matrix: Solid
Analysis Batch: 847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1
Total TPH	<50.0	U	50.0		mg/Kg		03/25/21 09:19	03/25/21 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*03/25/21 09:19*	*03/25/21 12:03*	*1*
o-Terphenyl	*107*		*70 - 130*	*03/25/21 09:19*	*03/25/21 12:03*	*1*

Lab Sample ID: LCS 880-834/2-A
Matrix: Solid
Analysis Batch: 847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1376	*+	mg/Kg		138	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1123		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-412-1
Project/Site: Hackberry DI2 SDG: Eddy County NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-834/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 847 **Prep Batch: 834**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1230		mg/Kg		123	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1109		mg/Kg		111	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-863/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 864

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/25/21 16:09	1

Lab Sample ID: LCS 880-863/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 864

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	269.1		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-863/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 864

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.8		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-412-1
Project/Site: Hackberry DI2 SDG: Eddy County NM

GC VOA

Prep Batch: 821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Total/NA	Solid	5035	

Prep Batch: 842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-842/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Total/NA	Solid	8021B	821
MB 880-842/5-A	Method Blank	Total/NA	Solid	8021B	842

GC Semi VOA

Prep Batch: 834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-834/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-834/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Total/NA	Solid	8015B NM	834
MB 880-834/1-A	Method Blank	Total/NA	Solid	8015B NM	834
LCS 880-834/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	834
LCSD 880-834/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	834

HPLC/IC

Leach Batch: 863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Soluble	Solid	DI Leach	
MB 880-863/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-863/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-863/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-412-1	BH01	Soluble	Solid	300.0	863
MB 880-863/1-A	Method Blank	Soluble	Solid	300.0	863
LCS 880-863/2-A	Lab Control Sample	Soluble	Solid	300.0	863
LCSD 880-863/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	863

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Client Sample ID: BH01

Date Collected: 03/23/21 10:24
Date Received: 03/23/21 13:55

Lab Sample ID: 890-412-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			821	03/24/21 16:24	MR	XM
Total/NA	Analysis	8021B		1	846	03/25/21 21:45	MR	XM
Total/NA	Prep	8015NM Prep			834	03/25/21 09:19	DM	XM
Total/NA	Analysis	8015B NM		1	847	03/25/21 14:10	AM	XM
Soluble	Leach	DI Leach			863	03/25/21 11:20	CH	XM
Soluble	Analysis	300.0		1	864	03/26/21 11:21	WP	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc. Job ID: 890-412-1
Project/Site: Hackberry DI2 SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: Hackberry DI2

Job ID: 890-412-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-412-1	BH01	Solid	03/23/21 10:24	03/23/21 13:55	

Cost center # 1080831001
Incident # NRM2031147310

Chain of Custody

eurofins | Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(281) 702-2329	Email:	joseph.hernandez@wsp.com, fatima.smith@wsp.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Hackberry DI 2	Turn Around	
Project Number:	TE0129 20156	☐ Routine ☒ Rush	
Project Location:	Eddy county	Due Date:	24 hrs
Sampler's Name:	Fatima Smith	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-009
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA O= 8021)	BTEX (EPA 8015)	Chloride (EPA 300.0)	Sample Comments
BH01	S	3/23/21	1024	6'		1		X	X	X	

Parameters

890-412 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Cole Clifton	3-23-21 1355			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-125 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-412-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 3/29/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Hackberry DI2	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8016NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:											
BH01 (890-412-1)	3/23/21	10 24 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Cloe Cluff	3.23.21			3/24/21 11:00am	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
Δ Yes Δ No		

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-412-1
SDG Number: Eddy County NM

Login Number: 412
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-412-1
SDG Number: Eddy County NM

Login Number: 412
List Number: 2
Creator: Mireles, David

List Source: Eurofins Midland
List Creation: 03/24/21 11:31 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 23620

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 23620
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NRM2031147310 HACKBERRY DI 2, thank you. This closure is approved.	7/16/2021